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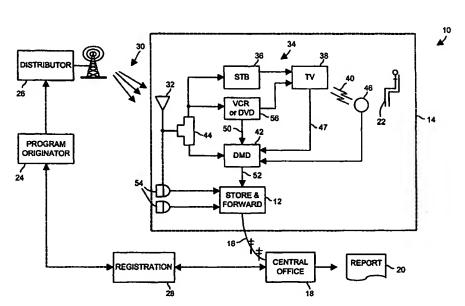
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(54) Title: APPARATUS AND METHOD FOR DETERMINING THE PROGRAMME TO WHICH A DIGITAL BROADCAST RECEIVER IS TUNED



(57) Abstract: An apparatus identifies a program selected for reception on a monitored receiver. The monitored receiver has a receiver output, and the selected program is one of a plurality of receivable programs. The apparatus includes a tuner and demodulator arranged to receive a predetermine done of the programs. A first feature extractor extracts a first set of characteristic features from the receiver output. A second feature extractor extract a second set of characteristic features from the predetermined program. A comparator compares the first and the second sets of characteristic features. A code extractor extracts a program identifying code from the prodetermined program if the first and the second sets of characteristic features match.





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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04H9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (dassification system followed by classification symbols) IPC 7 H04H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

Category •	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 974 299 A (MASSETTI ENRICO EMILIO) 26 October 1999 (1999-10-26) column 3, line 35 -column 4, line 15; claim 1	1,21,45, 55
A	US 5 768 680 A (THOMAS C DAVID) 16 June 1998 (1998-06-16) column 1, line 1 -column 3, line 55; claim 1	1,21,45, 55
A	EP 0 703 683 A (NIELSEN A C CO) 27 March 1996 (1996-03-27) column 1, line 1 -column 5, line 25; claim 1	1,21,45, 55
A	WO 99 59275 A (NIELSEN MEDIA RES INC) 18 November 1999 (1999-11-18) page 10, line 18 -page 16, line 7; claim 1	1,21,45, 55

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
Special categories of cited documents: 'A' document defining the general state of the art which is not considered to be of particular relevance 'E' earlier document but published on or after the international filing date 'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) 'O' document referring to an oral disclosure, use, exhibition or other means 'P' document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the International search 5 August 2002	Date of mailing of the International search report 14/08/2002
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Authorized officer De Haan, A.J.

INTERNATIONAL SEARCH REPORT

Intern al Application No
PC I / US 01/41333

		PC1/US 01/41333			
(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT					
Category °	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant	to claim No.		
A	WO 98 32251 A (NIELSEN MEDIA RES INC) 23 July 1998 (1998-07-23) page 14, line 1 -page 19, line 24; claim 1	1 59	21,45,		
A	US 5 023 929 A (CALL JAMES) 11 June 1991 (1991-06-11) column 1, line 1 -column 3, line 49; claims 1-3	1 55	,21,45,		
A	FR 2 555 383 A (BARRAULT CHRISTIAN) 24 May 1985 (1985-05-24) page 1, line 1 -page 2, line 8; claim 1	1 5!	,21,45, 5		
A	WO 94 11989 A (ARBITRON CO) 26 May 1994 (1994-05-26) page 4, line 17 -page 7, line 4; claim 1	1			
A	EP 0 598 398 A (WERUM KARL LUDWIG ;WIEGAND JUERGEN (DE)) 25 May 1994 (1994-05-25) column 1, line 1 -column 3, line 29; claim 1	1			
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INTERNATIONAL SEARCH REPORT

lation on patent femily members

Inten d Application No PCT/TOS 01/41333

				1	101/03	01/41333
Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5974299	A	26-10-1999	AU BR CA EP WO	4184599 9909273 2323937 1090504 9962260	A A1 A1	13-12-1999 21-11-2000 02-12-1999 11-04-2001 02-12-1999
US 5768680	A	16-06-1998	NONE			
EP 0703683	A	27-03-1996	US AU BR CA EP	5594934 2853295 9504084 2155815 0703683	A A A1	14-01-1997 04-04-1996 09-09-1997 22-03-1996 27-03-1996
WO 9959275	A	18-11-1999	AU AU BR CN EP EP JP WO US	736423 8298098 9810699 1262003 1043853 1043854 0985287 2002515684 9959275 2002059577 2002010919	A A A A A A A A A A A A A A A A A A A	26-07-2001 29-11-1999 05-09-2000 02-08-2000 11-10-2000 11-10-2000 15-03-2000 28-05-2002 18-11-1999 16-05-2002 24-01-2002
WO 9832251	A	23-07-1998	AU AU BR CN EP JP WO US	735672 3148997 9714323 1244982 0956669 2000517141 9832251 2002026635	A A A A A A A A A A A A A A A A A A A	12-07-2001 07-08-1998 27-06-2000 16-02-2000 17-11-1999 19-12-2000 23-07-1998 28-02-2002
US 5023929	Α	11-06-1991	NONE			
FR 2555383	A	24-05-1985	FR IT	2555383 1180145		24-05-1985 23-09-1987
WO 9411989	A	26-05-1994	AU AU CA EP IL JP NZ NZ WO US	678806 5868994 2147835 0688487 107624 8508617 259776 314404 9411989 5579124	A A1 A1 A A A A A A A A A A A A A A A A	12-06-1997 08-06-1994 26-05-1994 27-12-1995 18-03-1997 10-09-1996 24-06-1997 25-11-1998 26-05-1994 26-11-1996
EP 0598398	Α	25-05-1994	DE EP	4238681 0598398		26-05-1994 25-05-1994

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